

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number
WO 2005/068393 A1

(51) International Patent Classification⁷: **C04B 35/484**

(21) International Application Number:
PCT/US2004/044042

(22) International Filing Date:
30 December 2004 (30.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/533,990 2 January 2004 (02.01.2004) US

(71) Applicant (for all designated States except US): **VESUVIUS CRUCIBLE COMPANY [US/US]**; 27 Noblestown Road, Carnegie, PA 15106 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GUPTA, Amul** [US/US]; 1741 Park Meadow Drive, Jamestown, New York 14701 (US). **WINDER, Dr. Steven M.** [US/US]; 30 Hemlock Drive, Grand Island, New York 14702 (US).

(74) Agents: **SATINA, Donald M.** et al.; Vesuvius USA Corporation, 27 Noblestown Road, Carnegie, PA 15106 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/068393 A1

(54) Title: FUSION-CAST REFRactory WITH HIGH ELECTRICAL RESISTIVITY

(57) Abstract: A fusion-cast refractory is provided. The refractory comprises 0.8% to 2.5% Al₂O₃, 4.0% to 10.0% SiO₂ 86% to 95% ZrO₂, 0.1% to 1.2% B₂O₃, up to 0.04% Na₂O, up to 0.4% CaO, up to 0.1% Fe₂O₃ and up to 0.25% TiO₂.